

Amendments to the Claims

This listing of claims replaces all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Currently amended) A bicompartiment bag adapted to prepare a liquid solution, comprising an assembly of two strong flexible outer sheets (1, 2), in one (1) of which sheets an access bushing (4) is affixed in a first bore (3), wherein the interior of such bag is divided into two chambers by means of a third separating flexible sheet (7) provided with a screen-like part (9) at its distal end located at the bottom of the bag, said third separating sheet (7) which, correspondingly with said bushing (4) is provided with a second bore (8) affixed around its edge on a plane (10) of the bushing end projecting into the bag, of said two chambers, a first chamber is in communication with a first opening (13) of the bushing (4) to enable the connection of the first chamber with a solvent line, and the second chamber is in communication with a second opening (12) of the bushing (4) to enable the exit of solution from the second chamber and wherein the two outer (1, 2) and the separating sheet (7) are watertightly joined at their contour (1, 2), and a flexible inner sheet that divides an interior of the bag into a first chamber and a second chamber and that has a screen portion located at a

distal end thereof at a bottom portion of the bag, the two outer sheets and the inner sheet being watertightly joined at a periphery thereof, one of the two outer sheets having a first aperture located therein and an access bushing disposed in the first aperture, the inner sheet having a second aperture located therein that is in communication with the bushing and the inner sheet being affixed at a periphery of the second aperture to a plane of a bushing end that projects into the bag, the bushing having a first opening therein that provides communication between a solvent inlet line and the first chamber, and the bushing having a second opening therein that provides communication between the second chamber and a solution discharge line.

2. (Currently amended) A The bag according to claim 1,
~~characterized in that the plane (10) of the bushing end projecting wherein the plane of the end of the bushing that projects into the bag is annular.~~

3. (Currently amended) A The bag according to claim 1,
~~characterized in that wherein the first chamber is at least partially filled with a powdered solute.~~

4. (Currently amended) A The bag according to claim 2 3,
~~characterized in that wherein said powdered powdered solute is an~~
~~ingredient to be used for hemodialysis, in particular sodium~~
~~bicarbonate.~~

5. (Currently amended) A The bag according to claim 1,
~~characterized in that inside the second chamber is provided a~~
~~layer (5) separate from the bag, selected among a woven or~~
~~injected material or the like, freely extending from a recess (6)~~
~~made in correspondence with said bushing (4) to the bottom of the~~
~~chamber wherein the second chamber includes an unattached woven~~
~~or injected thermoplastic material layer having a recessed~~
~~portion adjacent the access bushing, the layer extending from the~~
~~access bushing to a bottom portion of the second chamber.~~

6. (Currently amended) A The bag according to claim 1,
~~characterized in that said bushing (4) is an annular body with a~~
~~discoid base (11) of a greater diameter than the first and the~~
~~second bore wherein a radial tube (12) communicating its central~~
~~axial space with the outside is located wherein the bushing has~~
~~an annular body, a central axial portion, a discoid base having a~~
~~base diameter that is larger than a diameter of the first~~
~~aperture and a diameter of the second aperture, and a radial tube~~

in the discoid base that communicates the central axial portion with an exterior of the bushing.

7. (Currently amended) A The bag according to claim 6,
~~characterized in that further comprising a second member (17) cover is snapped on that attaches to the bushing (4) as a first member in by a snap fit to provide an air-tight manner connection to the bag.~~

8. (Currently amended) A The bag according to claim 7,
~~characterized in that in an inner axial cylindrical space (13) in the bushing (4) there are means (14, 15) functionally cooperating with complementary means (24, 25) existing on the second member (17) thus insuring their connection; in said second member (17) there is an axial cylindrical tube (18) with its end being sealed by an initially sealed valve means (26), said axial tube (18) is surrounded by another coaxial cylinder (19) of a larger height, in the bottom of which there is at least one orifice (20) radially projecting towards the contour of said second member (17), wherein it ends in a peripheral groove (21) wherein an interior of the bushing includes a connecting portion and the cover includes a complementary connecting portion, the bushing connecting portion and the cover connecting portion cooperating so as to provide the attachment of the cover to the bushing, and~~

wherein the cover includes an axial cylindrical tube with a bottom end that is initially sealed by a valve, and a coaxial cylinder that surrounds and that extends higher than the axial cylindrical tube, the coaxial cylinder having in a bottom portion thereof an orifice that projects radially outward toward a contour of the cover and that terminates in a peripheral groove at the contour.

9. (Currently amended) A The bag according to claim 8,
~~characterized in that wherein~~ said valve (26) provided in the second member (17) ~~consists of~~ includes a thin sheet having lesser strength lines (27) disposed in a cross-shaped configuration and grooves (28) that are quadrangularly engraved in a quadrangular configuration across a circular section thereof the axial tube circular space, ~~which the grooves have having~~ a depth ~~in the order of~~ that is approximately one half of a thickness of the valve disc ~~thin~~ sheet.

10. (Currently amended) A The bag according to ~~claims 1~~ claim 3, characterized in that wherein the screen-like part (9) comprises screen portion includes a filter to retain the powder undissolved powdered solute.

11. (Currently amended) A The bag according to ~~claims~~ claim 7,
~~characterized in that said two members (4, 17) providing access~~
~~into the bag are coupled to each other by means of a thread~~
wherein the cover and the bushing each have a threaded portion
that cooperate to provide the snap-fit connection.

12. (Withdrawn) A process for manufacturing the bag according to claim 1 characterized in that it comprises the following steps: Continually circulating three laminar bands (1, 2, 7) of a suitable width and thickness superimposed on three levels, forming a first bore (3) in one of the outer bands (1) and a second bore (8) and a screen part (9) in the interposed band (7), positioning and welding a bushing (4) into the first (3) and onto the second (8) bore, perimetral welding and final cutting of the three bands.

13. (Withdrawn) A bag-manufacturing process according to claim 12 characterized in that a drain segment (5) is inserting between the two bands (1, 7) with the first (3) and second (8) bore before the perimetral welding step.

14. (Withdrawn) A bag-manufacturing process according to claim 12 characterized in that the bag is quality tested after the perimetral welding and final cutting step.

15. (Withdrawn) A bag-manufacturing process according to claim 12 characterized in that after the perimetral welding step the first chamber of the bag being defined by the outer band (2) having no bore and the interposed band (7) is at least partially filled with a powdered solute though an opening (13) in the bushing (4) and that the opening in the bushing is closed with a lid (26).

16. (New) The bag according to claim 9, wherein the valve opens for introduction of the solvent by separation of adjacent portions of the thin sheet along the lesser strength lines and by hinged action of another portion of the thin sheet along the grooves.

17. (New) The bag according to claim 8, wherein the cover orifice communicates solution from the bushing second opening to the solution discharge line.

18. (New) A bicompartment bag adapted to prepare a liquid solution, comprising:

a first flexible outer sheet having a first aperture therein, a second flexible outer sheet, and a first flexible inner sheet having a second aperture therein, the first inner

sheet dividing an interior of the bag into a first chamber and a second chamber and having a perforated portion located at a distal end thereof at a bottom portion of the bag, the outer sheets and the first inner sheet being watertightly joined at a periphery thereof;

 a bushing disposed in the first aperture and attached to the first outer sheet at a periphery of the bushing and attached to the first inner sheet at a portion thereof adjacent the second aperture, the bushing having a first flow channel therein that provides fluid communication between a solvent inlet line and the first chamber, and the bushing having a second flow channel therein that provides fluid communication between the second chamber and a solution discharge line; and

 a cover inserted in the bushing to provide an air-tight bag connection, the cover having an initially sealed valve therein that is openable so as to provide the fluid communication through the first flow channel.

19. (New) The bicompartiment bag according to claim 18, wherein the cover includes an axial cylindrical tube with a bottom end that houses the valve, and a coaxial cylinder that surrounds and that extends higher than the axial cylindrical tube, the coaxial cylinder having in a bottom portion thereof an orifice that projects radially outward toward a contour of the cover and that

terminates in a peripheral groove at the contour so as to communicate with the bushing second flow channel.

20. (New) The bicompartiment bag according to claim 18, wherein the first chamber is configured to house solute before introduction of the solvent to the bag, and the perforated portion of the first inner sheet is a screen that retains in the first chamber any undissolved portion of the solute.